Life and Behaviour of Wolves: The practicalities of reintroduction

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With the recent reintroduction of beavers to the Highlands and the myriad of re-wilding projects being conducted in Continental Europe, it is no surprise that the idea of reintroducing a large charismatic species to the Scottish Highlands captures interest and was recently debated on Earth Day in Lochinver, Scotland. To celebrate his tenth article for Wolf Print, researcher Pete Haswell thought it time he attempted to give an overview of the rather complicated issue he is most commonly asked about: reintroduction of wolves to the UK.

The UK is encouraged to consider the feasibility of restoring species that have become locally extinct by article 11 of the Bern Convention, article 9 of the Convention of Biological Diversity and under the EC habitats directive 92/43/EEC. The aim of any reintroduction should be to establish viable free-ranging populations in the wild that require minimal long term management. It is important to consider the factors involved in the animal's extirpation and those involved in its reintroduction, as well as the consequences before any animal is reintroduced. In fact, recommendation R(85)15 of the Council of Europe on the reintroduction of wildlife species suggests that reintroduction projects should be preceded by ecological and socioeconomic research and should proceed only after the causes of the species' disappearance has been remedied. It is also worth noting that the UK Conservation (Natural Habitats, etc.) Regulations 1994 takes a present-day view of those species whose natural range includes Great Britain and do not include any extinct mammals.

Wolves are believed to have been lost to the British Isles by the late 1600s. The Scottish Highlands, having a lower human population and higher wild ungulate prey density than in parts of Europe where large carnivores survive, are generally considered the only viable UK region capable of supporting a stable wolf population. With recent news articles covering the growth in deer populations, it is no surprise some would welcome the wolf's return. Red deer populations are thought to be close to the food-limited carrying capacity across much of the Highlands and high deer densities hamper reforestation, degrade habitat, decrease bird densities, collide with traffic and compete for grazing pastures with livestock.

Unlike many parts of Europe, there isn't the economic demand for deer products, preventing control from being cost-efficient. Some simulations suggest that reintroducing wolves is likely to generate conservation benefits by lowering deer densities and freeing deer estates from the financial burden of costly hind culls, earning estates an extra £250 per 10km^2 per year. However, other simulations suggest wolves are unlikely to have any significant impact on the high density deer populations now living in Scotland. It is possible that wolf activity could have similar stabilising ecosystem service effects to those seen elsewhere, maybe even providing scavengeable food sources for threatened species like pine martens and the wild cat as well as birds of prey. Eco-tourism would no doubt provide economic value and the cultural benefits of the species are reflected by the generally positive attitudes found in studies of the Scottish public towards the idea.

So is it reasonable? There is no easy answer; reintroduction would require in-depth study as well as an incredible amount of preparation and continued management. Like the rest of the UK any introduced animals would require strict

Main picture: Danny Kidby-Hunter, Wolves: Vladimir Bologov

ties of reintroduction

management. A key question is: can we truly predict the ecological implications wolves will have on other sensitive species or habitats? Even once the environmental benefits and costs are weighed up, ecological models and habitat feasibility studies completed, there would be a wealth of management complications to contemplate. The human element cannot be considered enough. The potential for conflicts with livestock farmers would require preparations and outreach to provide knowledge and tools for the husbandry techniques needed to protect livestock, as well as considering how best to approach compensation schemes for losses. The use of livestock guarding dogs would also require cultural change and engagement for other landscape users. Wolf conflicts with recreational users, dogs, hunters and even encroachment on refuse sites and areas of human habitation would all need to be considered and managed. Without public and stakeholder support, engagement and consideration, any reintroduction effort would likely be a disaster. An adaptable management plan considering the needs of all interested parties would be essential.

Problems arise even in the seemingly more simple issue of obtaining wolves for reintroduction. Where will the wolves come from? Will they be wild caught or captive bred? Will wolves raised in captivity be able to survive and will they be habituated to people – leading to conflicts? How many will be introduced and with what level of genetic diversity? Will they be socially bonded? Is it fair to upset social groups and pack dynamics? One of the most pivotal questions for the entire idea of reintroduction is: will inbreeding depression and genetic diversity pose a problem? Being an island population, will it be possible to obtain enough diversity to sustain a stable population without welfare implications, or will it constantly need to be rescued with mainland stock?

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Another problem arises when you consider the wolf's roaming capabilities. What are the management options when populations expand to fill available territory and migrate into inappropriate areas? How will the population be managed and will those in favour of reintroduction be happy with this? Hybridisation with domestic dogs, traffic collisions and conflicts unacceptable to the public are big risks with wolves expanding into areas outside any proposed reintroduction zone. Can a reintroduced population truly be considered self-sustaining with such a high level of future management and interference?

Fenced reserves have been proposed by some as a means to provide ecosystem services, protect endangered species and prevent many potential conflicts posed by a truly wild release. Such enclosures are used in South Africa to preserve African wild dogs. These populations are artificially dispersed with their gene flow managed and frequency of exchange between enclosures based on the reproductive lifespan. These animals have however begun to alter behaviour, utilising fences to gain a somewhat unfair advantage in prey capture. Some key questions of this approach must be asked: can human interference truly replace complex social dynamics and migratory behaviour? Is the welfare of the enclosed animals truly upheld? And, realistically, would enclosures provide ecosystem services and scientific opportunities or simply serve as little more than a tourist attraction?

Attempting to answer the popular question of wolf reintroduction to the UK, one simply comes across more questions. This is the crux of the issue: it is incredibly complicated, with too much to be considered to answer accurately without many years of in-depth study. It is likely that there are many considerations I have also neglected to recount. Will we see wolves roaming Britain again in our lifetime? Unlikely, but I suppose we can never be too sure. As sad as the loss of many charismatic mega-fauna is to the British Isles, we have a great abundance of wildlife that we should be proud of, enjoy and continue to protect. Lessons have hopefully been learnt and we should be careful with our delicate islands, as we do not have the fortune that the mainland has in having our mistakes rectified easily.

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